

## 1 ABSTRACT OF THE DISCLOSURE

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3 The invention provides a method and system for persistent and reliable de-  
4 livery of event messages. Those parts of the system responsible for delivering event  
5 messages are able to persistently maintain those event messages until the intended recipi-  
6 ent of the event message confirms delivery of those event messages. Those parts of the  
7 system responsible for recovering from system crashes and other system errors are able to  
8 persistently maintain those event messages until delivery, even after recovery from sys-  
9 tem crashes or other system errors. The system includes a set of event message produc-  
10 ers, and maintains an event-indication queue of those event messages provided by the  
11 event producers using a set of pre-allocated resources. An event-distribution engine dis-  
12 tributes event messages to intended recipients and, after having received confirmation  
13 that the event messages were received, removes them from the event-indication queue.  
14 Recipients of event messages receive the event messages, acknowledge their receipt  
15 thereof, and might take action in response to the event message. The system includes  
16 persistent memory, initialization memory, and recipient persistent memories, and pro-  
17 vides upon recovery from system crashes or other system error, an ability to replay event  
18 messages recorded in those memories, to re-present them as event messages. A cluster of  
19 file servers collectively forming a highly-available system shares persistent memories, so  
20 that upon a system crash or other system error, at least one other file server has a record  
21 of those event messages.